



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 904116		FOR FURTHER ACTION	See Form PCT/IPEA/416																								
International application No. PCT/JP2004/007468	International filing date (day/month/year) 25.05.2004	Priority date (day/month/year) 27.05.2003																									
International Patent Classification (IPC) or national classification and IPC																											
Applicant SHARP KABUSHIKI KAISHA																											
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>4</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table border="0"><tr><td><input checked="" type="checkbox"/></td><td>Box No. I</td><td>Basis of the report</td></tr><tr><td><input type="checkbox"/></td><td>Box No. II</td><td>Priority</td></tr><tr><td><input type="checkbox"/></td><td>Box No. III</td><td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td></tr><tr><td><input type="checkbox"/></td><td>Box No. IV</td><td>Lack of unity of invention</td></tr><tr><td><input checked="" type="checkbox"/></td><td>Box No. V</td><td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VI</td><td>Certain documents cited</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VII</td><td>Certain defects in the international application</td></tr><tr><td><input type="checkbox"/></td><td>Box No. VIII</td><td>Certain observations on the international application</td></tr></table>				<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand		Date of completion of this report																									
Name and mailing address of the IPEA/JP		Authorized officer																									
Facsimile No.		Telephone No.																									

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/007468

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))
☐ publication of the international application (Rule 12.4)
☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

☐ the international application as originally filed/furnished

☒ the description:

pages 1-38 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. 2, 3, 10, 12, 14, 16, 17, 19, 21, 23-25, 28, 30-32, as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* 1, 4, 5, 9, 33-37 received by this Authority on 10.03.2005

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1-20 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☒ the claims, nos. 6-8, 11, 13, 15, 18, 20, 22, 26, 27, 29

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/007468

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-5, 9, 10, 12, 14, 16, 17, 19, 21, 23-25, 28, 30-37</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-5, 9, 10, 12, 14, 16, 17, 19, 21, 23-25, 28, 30-37</u>	NO
Industrial applicability (IA)	Claims	<u>1-5, 9, 10, 12, 14, 16, 17, 19, 21, 23-25, 28, 30-37</u>	YES
	Claims	_____	NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 11-212471 A (Sanyo Electric Co., Ltd.), 06 August 1999, column 1, lines 23 to 50; column 7, line 43 to column 8, line 17; column 8, lines 37 to 46; and fig. 9 to 11 (Family: none)</p> <p>Document 2: JP 2000-254383 A (Nihon Kentetsu Co., Ltd.; Mitsubishi Electric Corp.), 19 September 2000, column 1, line 48 to column 2, line 9 (Family: none)</p> <p>Document 3: JP 2000-271385 A (Nihon Kentetsu Co., Ltd.; Mitsubishi Electric Corp.), 03 October 2000, column 1, line 45 to column 2, line 10 (Family: none)</p> <p>Document 4: JP 11-255467 A (Yoshikawa Kogyo Kabushiki Kaisha), 21 September 1999, column 1, lines 11 to 20; column 1, lines 30 to 37; column 2, lines 4 to 6; column 4, lines 2 to 19; and fig. 2 (Family: none)</p> <p>Document 5: JP 2003-94982 A (Nissan Motor Co., Ltd.), 03 April 2003, column 1, lines 41 to 50 and column 2, lines 6 to 41 (Family: none)</p> <p>Document 6: JP 2003-47121 A (Sumitomo Wiring Systems, Ltd.), 14 February 2003, column 2, lines 22</p>			

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/007468

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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to 27 (Family: none)

Document 7: JP 2002-21831 A (Takeuchi Kogyo Kabushiki Kaisha), 23 January 2002, column 2, lines 40 to 46 (Family: none)

Document 8: JP 2001-62187 A (Sharp Corp.), 13 March 2001, column 2, lines 15 to 18 (Family: none)

Document 9: JP 8-155875 A (Kikkoman Corp.), 18 June 1996, fig. 2 (Family: none)

Document 10: JP 64-42888 U (NEC Corp.), 14 March 1989, fig. 1 (Family: none)

Document 11: JP 2003-89116 A (Sharp Corp.), 25 March 2003, page 1, lower left column and column 4, lines 2 to 3 (Family: none)

(1) The inventions set forth in claims 1 to 5 and 9 do not involve an inventive step in the light of documents 1 to 3.

Documents 1 to 3 disclose the feature of "breaking the connection between the drive part and the driven part along the axial direction of the connecting rod." In addition, applying a strong force in order to forcibly break a connection is simply the most primitive method of breaking a connection (refer to documents 4 to 8); therefore, it would have been exceedingly obvious to a person skilled in the art to break the connections in the inventions that are disclosed in documents 1 to 3 by applying a strong force thereto. In addition, the written response submitted by the applicant indicates that "even if one were to attempt to separate the drive part and the driven part by merely applying a strong force thereto while the driven part is affixed to the connection rod,"

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/007468

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

the connection between the drive part and the driven part will not necessarily be broken, and further indicates that "it is foreseeable that the connecting rod may not break free from the drive part and that the resin water tank may be shattered by the water extraction tank, which is to say the driven part, thereby degrading the quality of the recovered resin while also decreasing the recovery efficiency." Therein, the disclosure does not sufficiently specify the necessary conditions for separating the drive part and the driven part in an appropriate manner; therefore, the inventions that are set forth in claims 1 to 5 and 9, which are merely inventions for attempting to separate the drive part and the driven part by simply applying a strong force thereto while the driven part is affixed to the connection rod, do not involve an inventive step.

(2) The inventions set forth in claims 10, 12, 14, 16, 19, 21 and 23 to 25 do not involve an inventive step in the light of documents 1, 4, 9 and 10.

The following explanations are presented in addition to the explanations in section (1), above.

It would have been easy for a person skilled in the art to conceive of employing a crane that has been equipped with an opening/closing claw, which comprises end parts, and a claw driving part, which presses upon said opening/closing claw, as the means for breaking the connections in the light of the disclosures of documents 4, 9 and 10. In addition, the question of whether or not to connect and mount the claw driving part to the opening/closing claw is merely a simple design matter, and it is common practice to configure so that it is

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/007468

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
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possible to detach the end parts of the opening/closing claw (for example, it is possible to remove the hook (1) in the invention that is disclosed in document 4). Furthermore, when separating members that have been connected it is common practice to press upon one of the members.

(3) The inventions set forth in claims 28, 30, 31 and 32 do not involve an inventive step in the light of documents 1 to 3.

The following explanations are presented in addition to the explanations in section (1), above.

It would be possible to re-use the resin (for example, refer to document 11), to use a mounting table that comprises a mobile mounting surface and to provide a splash prevention means, as necessary.

(4) The inventions set forth in claims 33 to 37 do not involve an inventive step in the light of documents 1 to 3.

The following explanations are presented in addition to the explanations in section (1), above.

It is common practice to carry out operations using the minimum amount of power that is necessary.

In addition, it would be possible to re-use the resin, to use a mounting table that comprises a mobile mounting surface and to provide a splash prevention means, as necessary.